

## REMARKS

Claims 58-77 are pending in the present Application. All claims are rejected under 35 U.S.C. § 103(a) as being unpatentable. Applicants are amending claims 65, 72, and 73, canceling claims 58-64, 67-71, and 74-77, and adding new claims 78-93. No new matter has been added. In view of the following remarks, Applicants respectfully request reconsideration of the Application.

### Rejection under 35 U.S.C. § 103(a)

On page 3 of the Office Action, claims 58-66, 71-73, and 77 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,606,650 to Kelley et al. (hereinafter, “Kelley”) in view of non-patent literature, Williams, L., “Pyramidal Parametrics” (hereinafter, “Williams”). On page 6 of the Office Action, claims 67-70 and 74-76 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelley in view of Williams and further in view of U.S. Patent No. 5,651,104 to Cosman (hereinafter, “Cosman”). In response to the Office Action, Applicants are canceling claims 58-64, 67-71, and 74-77, and amending claims 65, 72, and 73, to expedite allowance of the Application. Applicants reserve the right to pursue the canceled claims in a continuation application.

As amended, claims 65 and 72 recite, “accessing a specular reflectance coefficient in a specular reflectance coefficient map associated with a texture map of the texture, the specular reflectance coefficient indicative of the specular reflectance of the texture.” In the context of the present Application, a **texture** is fundamentally different from a **surface**. Kelly discloses mapping a **texture** to a **surface** by using a texture map (col. 1, lines 16-19). Williams discloses a shading function for a **surface** that depends on the shape of a surface, the light reflection

properties of the surface, the position of a light source, and the position of an observer's eye (p. 7). Williams further discloses an illumination map which could be used to cast reflections onto **specular surfaces** (p.8). In contrast to amended claims 65 and 72, Williams and Kelly, individually or in combination, do not teach or suggest a specular reflectance coefficient indicative of the specular reflectance of a **texture**.

An advantage of a specular coefficient map for a **texture** is that it allows efficient modeling of various materials. As disclosed in the present application, “[i]nstead of using a constant specular reflectance coefficient for the entire object, a *reflectance map* holding  $k_s(u, v)$  can be associated to a texture map. This is an efficient method to model materials like wrinkled leather, varnished wood, embossed paper and more” (p. 19).

For at least the above-stated reasons, Applicants respectfully submit that claims 65 and 72 are not obvious over Kelley in view of Williams and are therefore allowable. Claim 66 depends directly from claim 65 and is allowable for at least the same reasons as claim 65.

As amended, claim 73 recites, “accessing a detail map comprising a plurality of structures characteristic of a pattern for the texture.” As disclosed in the present Application, “a small set of micro-structures might be sufficient to characterize the whole texture” (p. 20). In contrast to amended claim 73, Kelly and Williams, individually or in combination, do not teach or suggest a detail map having **structures** characteristic of a **pattern** for a **texture**. For at least these reasons, Applicants assert that claim 73 is allowable.

Amended claim 73 further recites, “associating at least one texel of the texture map with a region of the detail map.” In contrast to claim 73, Kelly and Williams, individually or in combination, do teach or suggest associating a texel of a texture map with a region of a detail map. For these additional reasons, Applicants assert that claim 73 is allowable.

### New Claims

Applicants have added new claims 78-93. Claim 78 depends from claim 72 and is allowable for at least the same reasons provided above for claim 72. Each of claims 79-85 depends either directly or indirectly from claim 73 and is allowable for at least the same reasons provided above for claim 73.

New independent claim 86 recites “accessing a detail map comprising a plurality of structures characteristic of a pattern for the texture” and “associating at least one texel of the texture map with a region of the detail map.” As discussed hereinabove in relation to claim 73, Kelly and Williams, individually or in combination, do not teach or suggest a detail map having structures characteristic of a pattern for a texture. As also discussed hereinabove in relation to claim 73, Kelly and Williams, individually or in combination, do teach or suggest associating a texel of a texture map with a region of a detail map. For at least these reasons, Applicants respectfully submit that claim 86 is not obvious over Kelly in view of Williams and is therefore allowable. Each of claims 87-93 depends either directly or indirectly from claim 86 and is allowable for at least the same reasons provided above for claim 86.

## CONCLUSION

Based on the foregoing remarks, Applicants believe that the rejections in the Office Action of April 19, 2004 are fully overcome, and that the Application is in condition for allowance. If the Examiner has questions regarding the case, he is invited to contact Applicants' undersigned representative at the number given below.

Respectfully submitted,

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By: \_\_\_\_\_



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